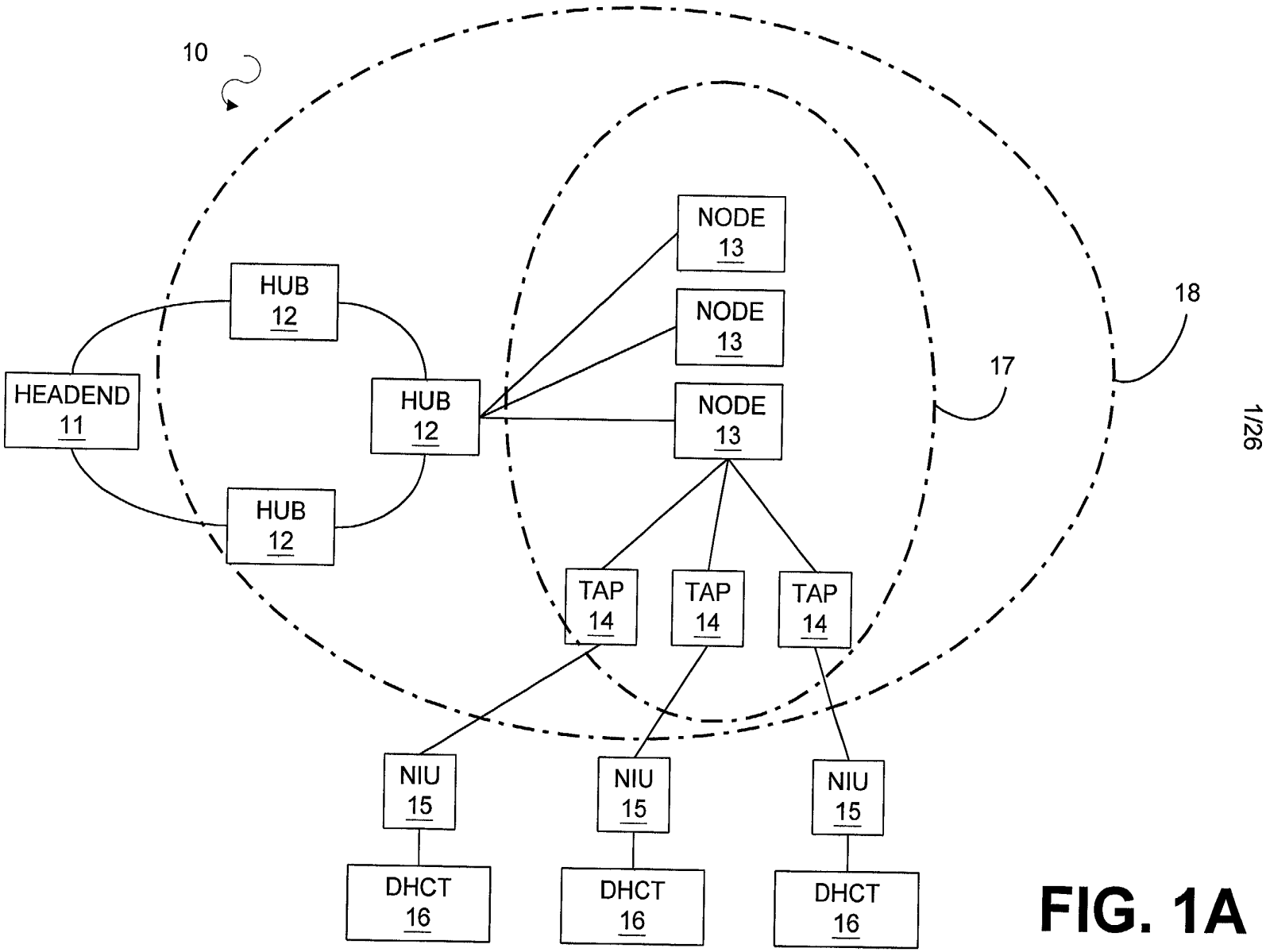
10
HEADEND
11
HUB
12
HUB
12
HUB
12
NODE
13
NODE
13
NODE
13
17
18
TAP
14
TAP
14
TAP
14
NIU
15
NIU
15
NIU
15
DHCT
16
DHCT
16
DHCT
16

FIG. 1A

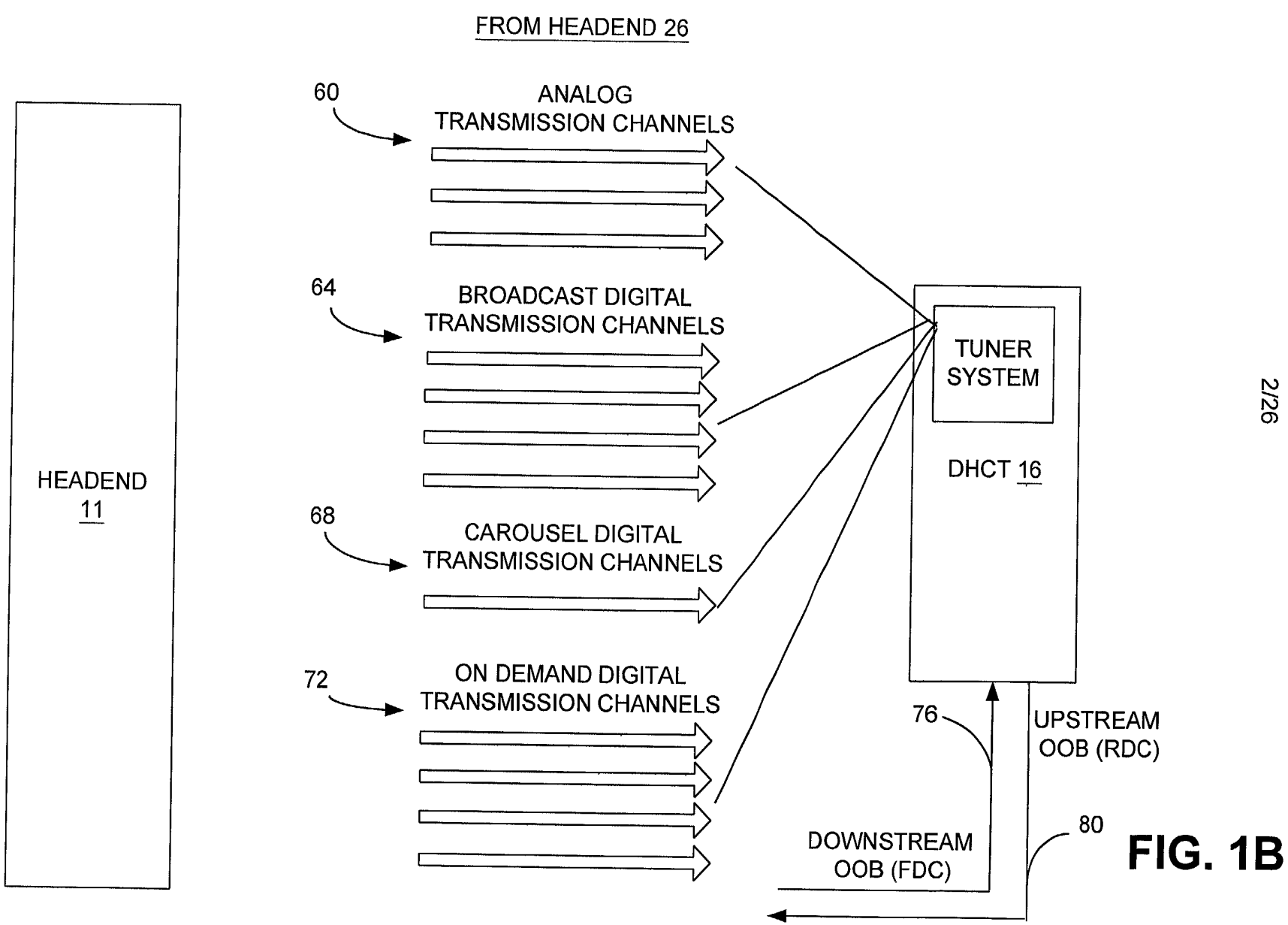
FROM HEADEND 26
HEADEND 11
60
ANALOG TRANSMISSION CHANNELS
64
BROADCAST DIGITAL TRANSMISSION CHANNELS
68
CAROUSEL DIGITAL TRANSMISSION CHANNELS
72
ON DEMAND DIGITAL TRANSMISSION CHANNELS
TUNER SYSTEM
DHCT 16
76
UPSTREAM OOB (RDC)
80
DOWNSTREAM OOB (FDC)

FIG. 1B

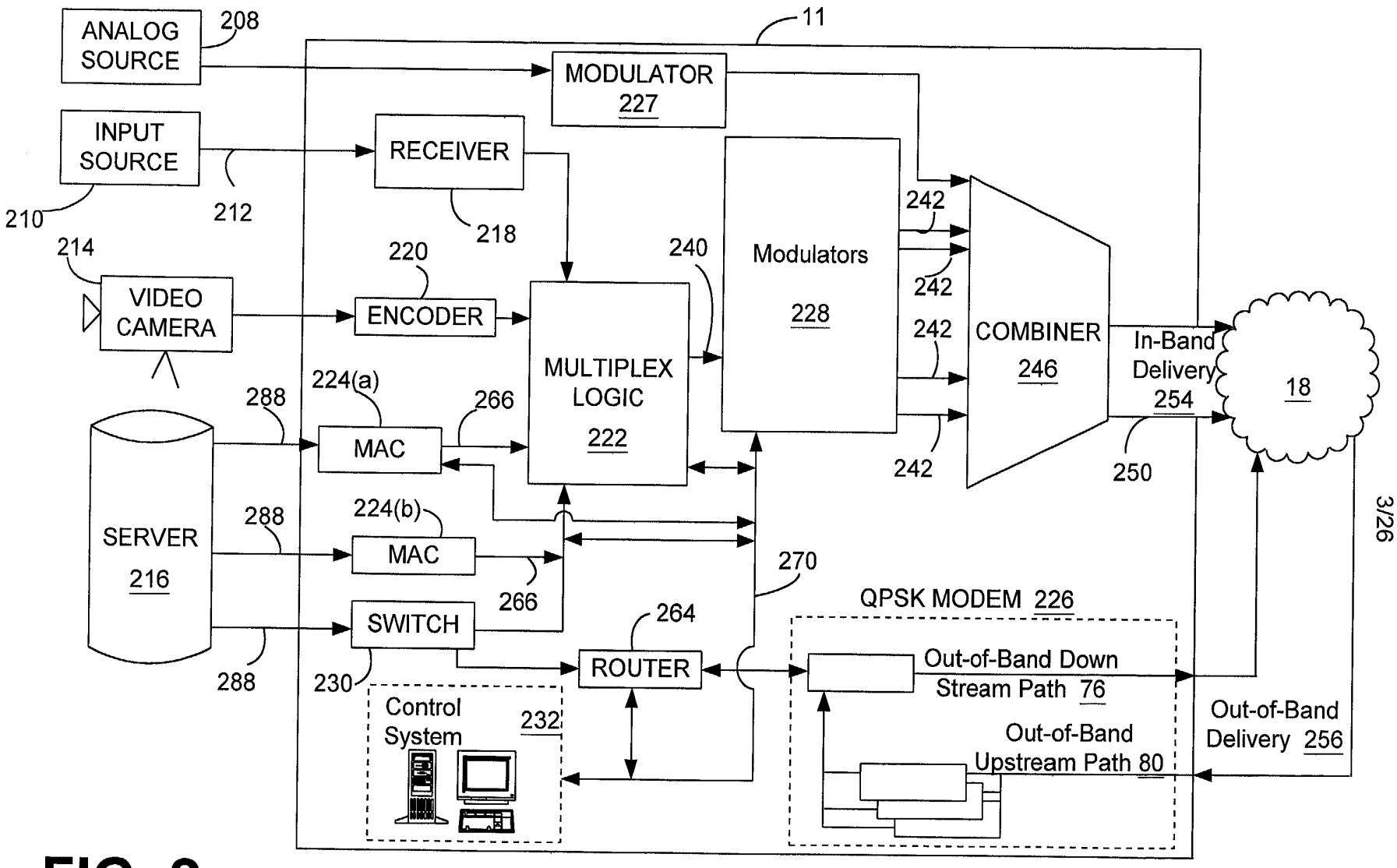
ANALOG SOURCE
208
11
MODULATOR
227
INPUT SOURCE
210
212
RECEIVER
218
214
VIDEO CAMERA
220
ENCODER
240
MULTIPLEX LOGIC
222
Modulators
228
242
242
242
242
COMBINER
246
In-Band Delivery
254
18
250
224(a)
288
266
MAC
SERVER
216
288
224(b)
MAC
266
288
SWITCH
230
270
264
ROUTER
QPSK MODEM 226
Out-of-Band Down Stream Path 76
Out-of-Band Upstream Path 80
Out-of-Band Delivery 256
Control System
232
3/26

FIG. 2

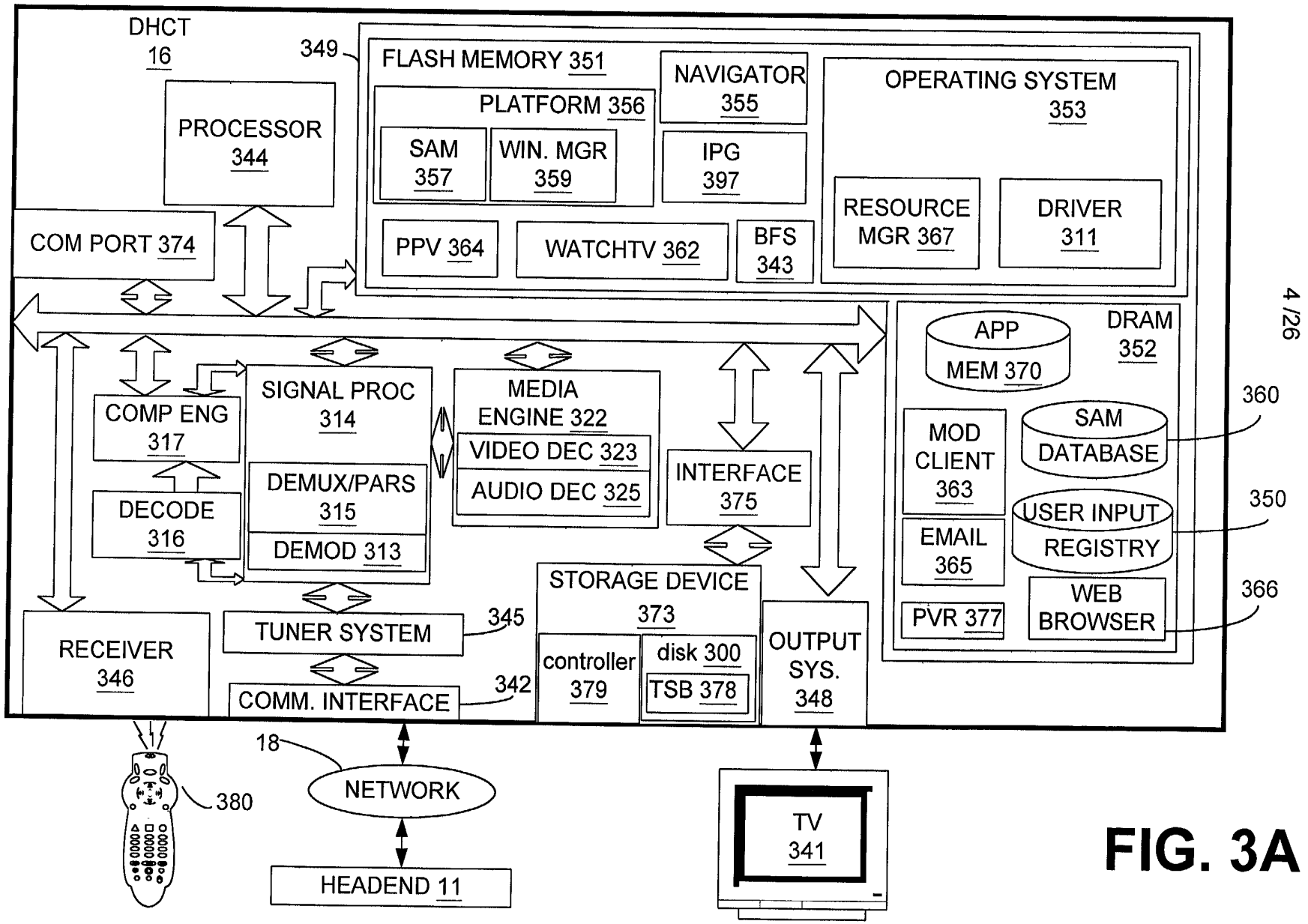
DHCT
16
349
FLASH MEMORY 351
NAVIGATOR
355
OPERATING SYSTEM
353
PROCESSOR
344
PLATFORM 356
SAM
357
WIN. MGR
359
IPG
397
RESOURCE
MGR 367
DRIVER
311
COM PORT 374
PPV 364
WATCHTV 362
BFS
343
DRAM
352
APP
MEM 370
SIGNAL PROC
314
MEDIA
ENGINE 322
COMP ENG
317
VIDEO DEC 323
AUDIO DEC 325
INTERFACE
375
MOD
CLIENT
363
SAM
DATABASE
360
DEMUX/PARS
315
DECODE
316
DEMOD 313
USER INPUT
REGISTRY
350
EMAIL
365
STORAGE DEVICE
373
WEB
BROWSER
366
PVR 377
RECEIVER
346
TUNER SYSTEM
345
OUTPUT
SYS.
348
controller
379
disk 300
TSB 378
COMM. INTERFACE
342
18
NETWORK
380
TV
341
HEADEND 11

FIG. 3A

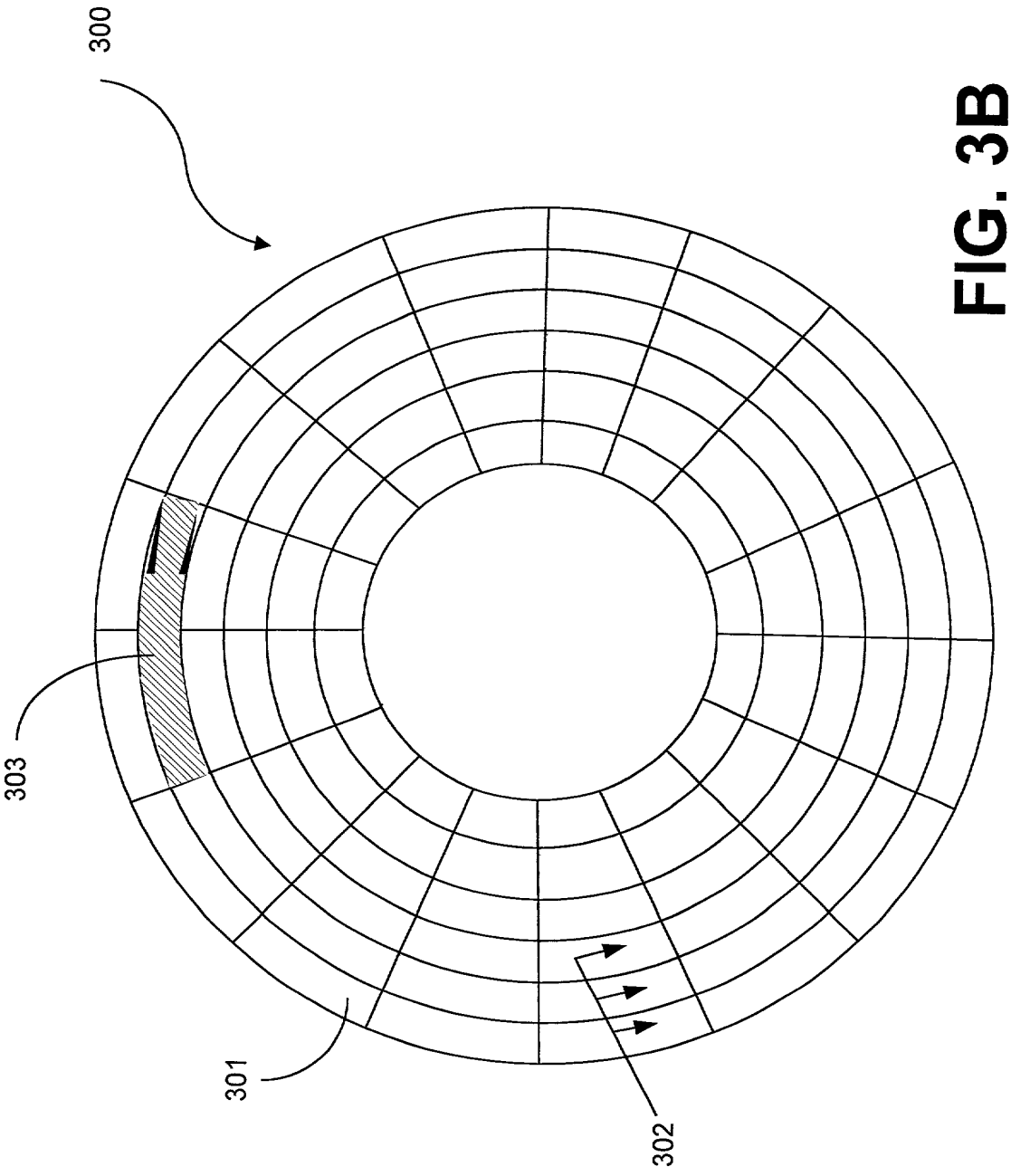

FIG. 3B

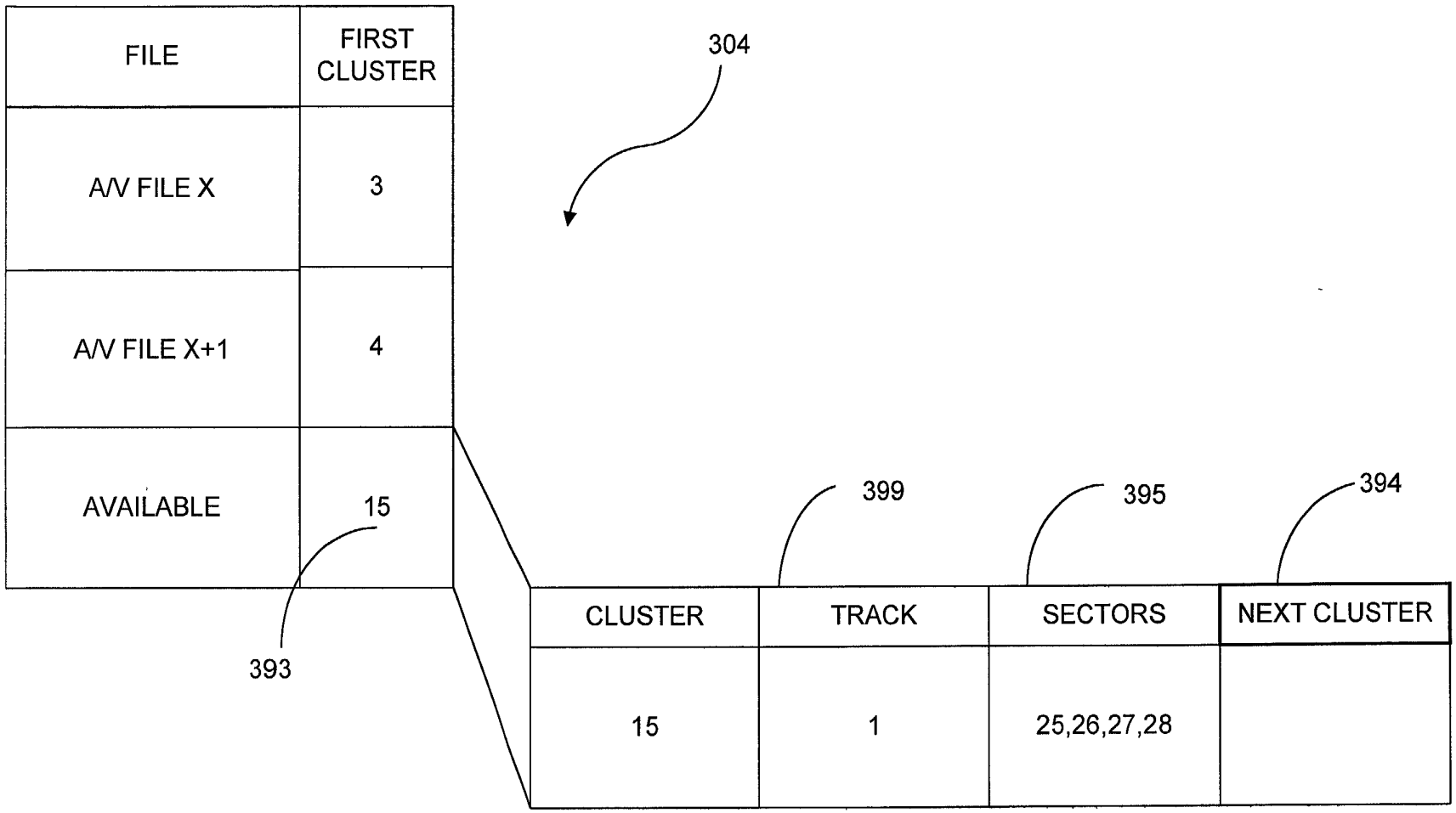
FILE
FIRST CLUSTER
A/V FILE X
3
A/V FILE X+1
4
AVAILABLE
15
304
393
399
395
394
CLUSTER
TRACK
SECTORS
NEXT CLUSTER
15
1
25,26,27,28

FIG. 3C

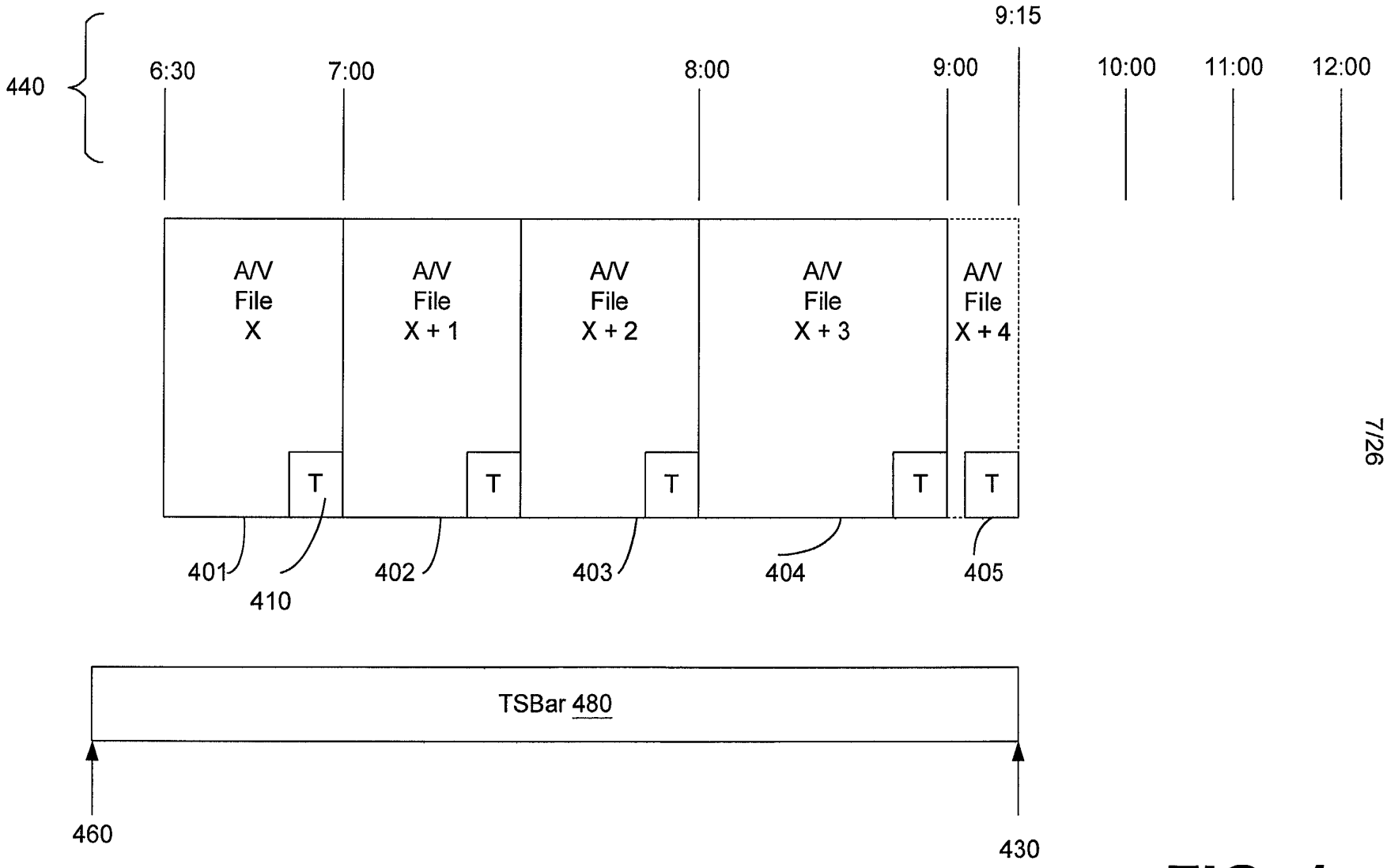
440
6:30
7:00
8:00
9:00
9:15
10:00
11:00
12:00
A/V File X
A/V File X + 1
A/V File X + 2
A/V File X + 3
A/V File X + 4
T
401
410
402
403
404
405
TSBar 480
460
430

FIG. 4

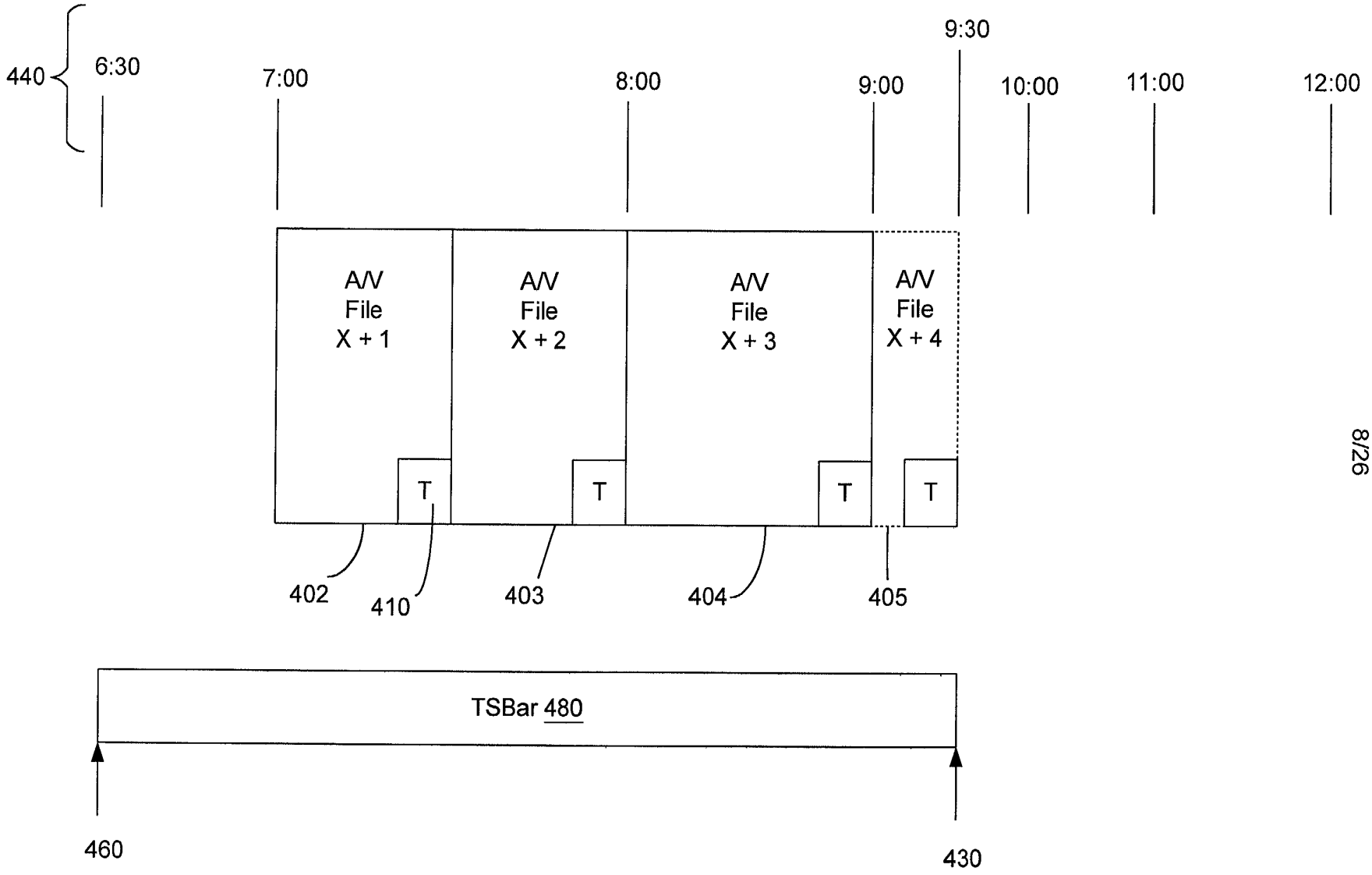
440
6:30
7:00
8:00
9:00
9:30
10:00
11:00
12:00
A/V File X + 1
A/V File X + 2
A/V File X + 3
A/V File X + 4
T
T
T
T
402
410
403
404
405
TSBar 480
460
430

FIG. 5

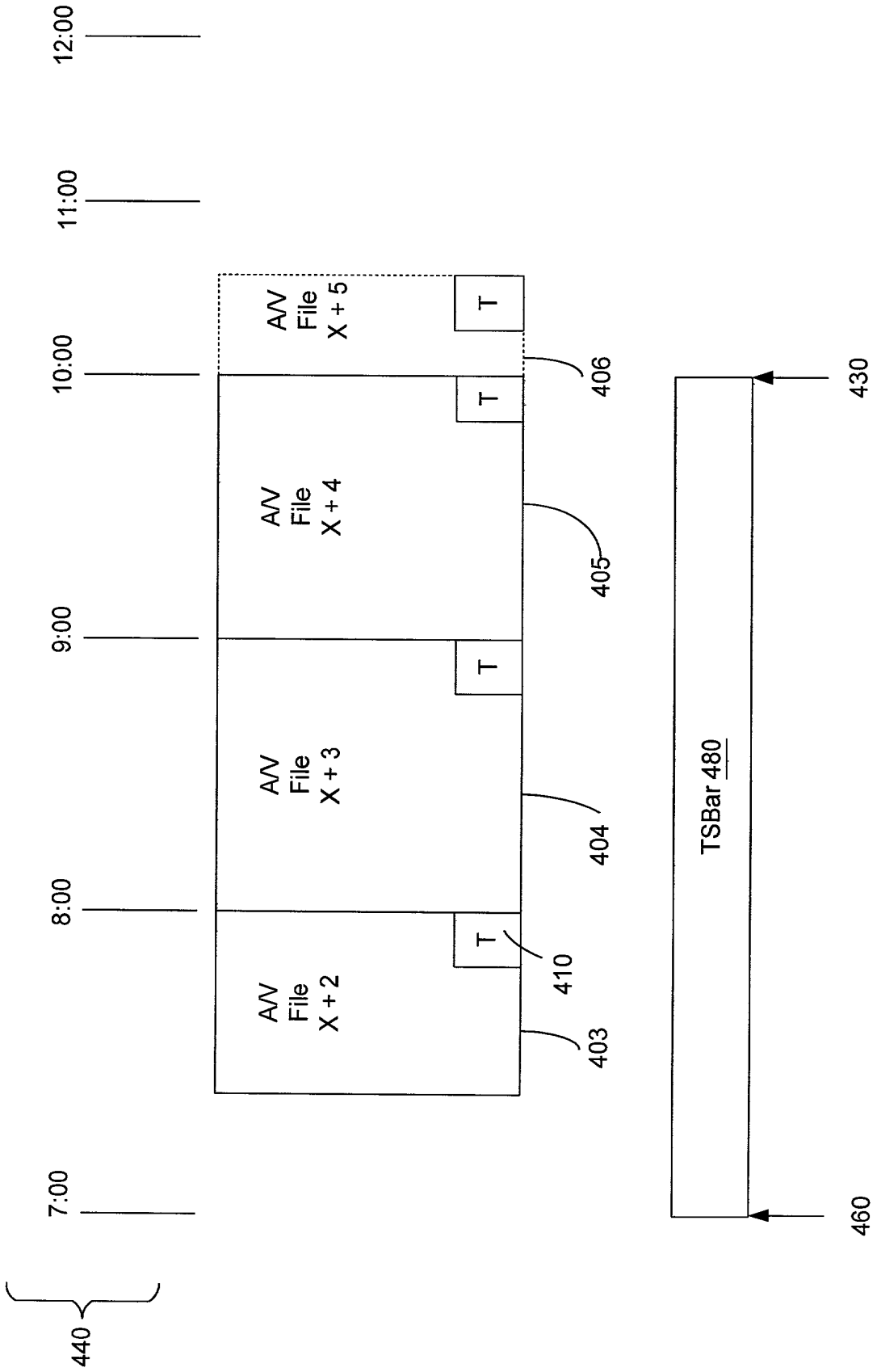
12:00
11:00
10:00
9:00
8:00
7:00
440
A/V File X + 2
A/V File X + 3
A/V File X + 4
A/V File X + 5
T
403
404
405
406
410
TSBar 480
430
460

FIG. 6

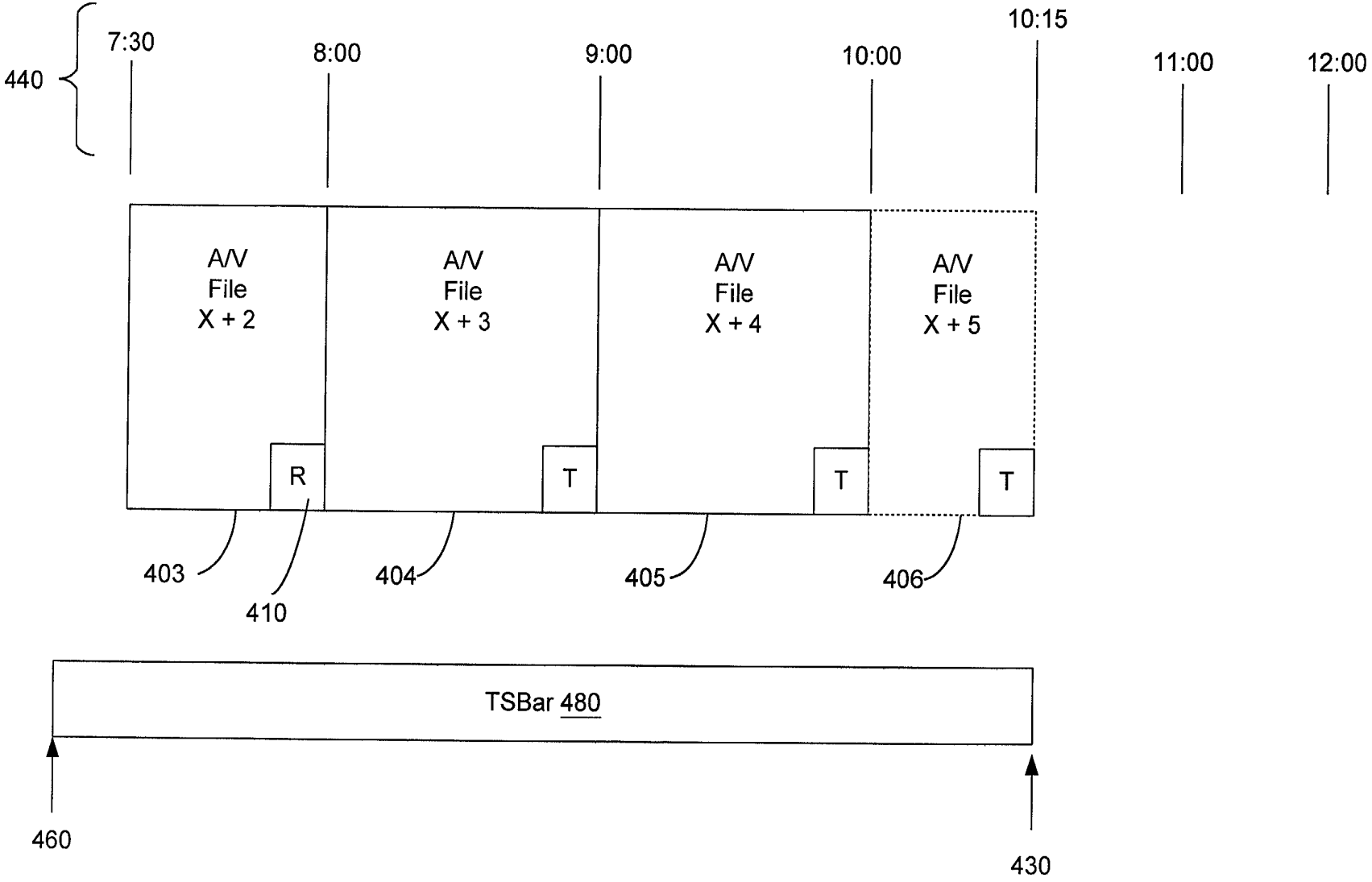
440
7:30
8:00
9:00
10:00
10:15
11:00
12:00
A/V File X + 2
A/V File X + 3
A/V File X + 4
A/V File X + 5
R
T
T
T
403
410
404
405
406
TSBar 480
460
430

FIG. 7

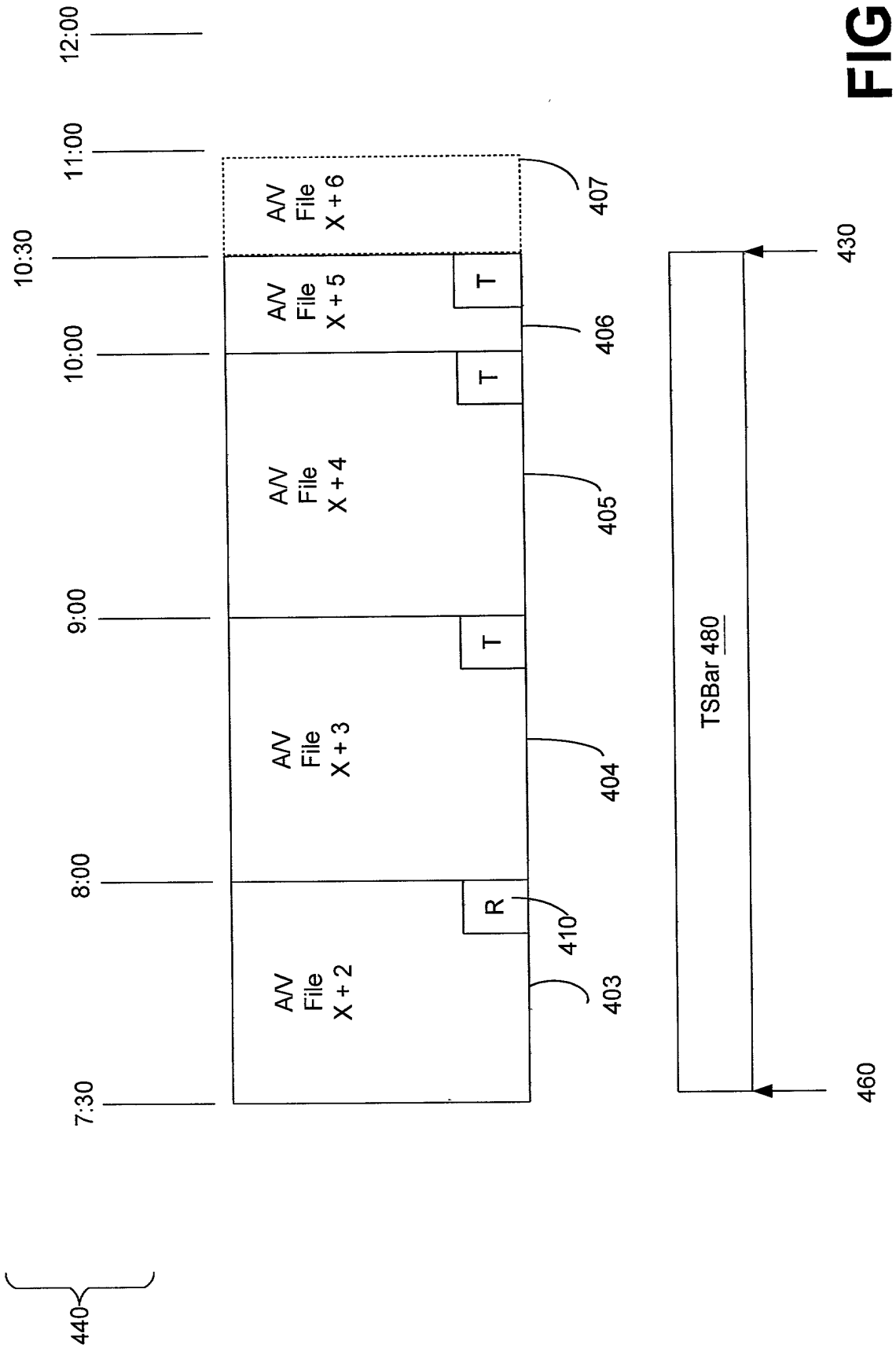
12:00
11:00
10:30
10:00
9:00
8:00
7:30
A/V File X + 6
A/V File X + 5
A/V File X + 4
A/V File X + 3
A/V File X + 2
T
T
T
R
407
406
405
404
403
410
430
460
TSBar 480
440

FIG. 8

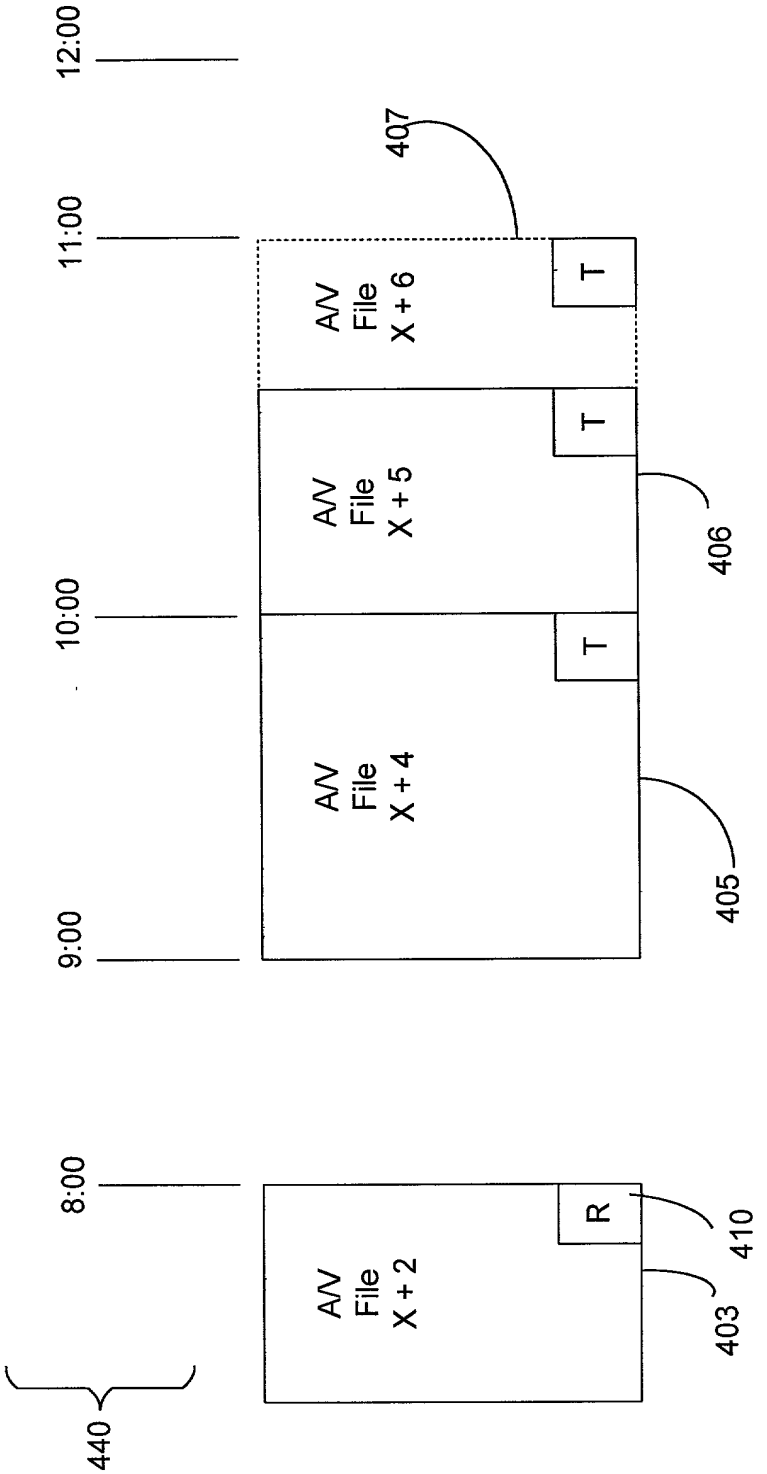
12:00
11:00
10:00
9:00
8:00
440
A/V File X + 2
R
403
410
A/V File X + 4
T
405
A/V File X + 5
T
406
A/V File X + 6
T
407
TSBar 480
430
460

FIG. 9

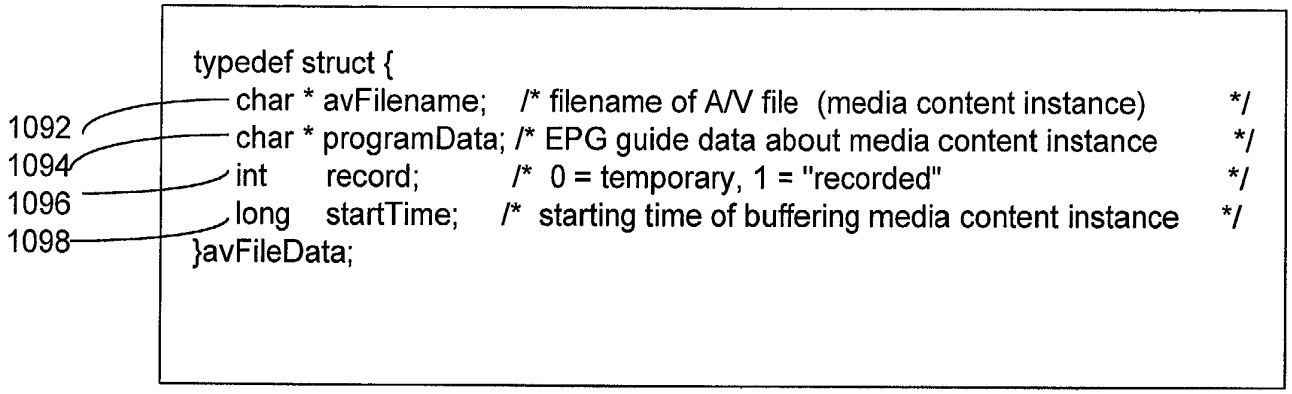

FIG. 10A

```
typedef struct {
    tsbNode       *nextNode;  /* pointer to next media content instance    */
    tsbNode       *prevNode;  /* pointer to previous media content instance*/
    avFileData    *nodeData;  /*  data for current media content instance   */
}tsbNode;
```

FIG. 10B

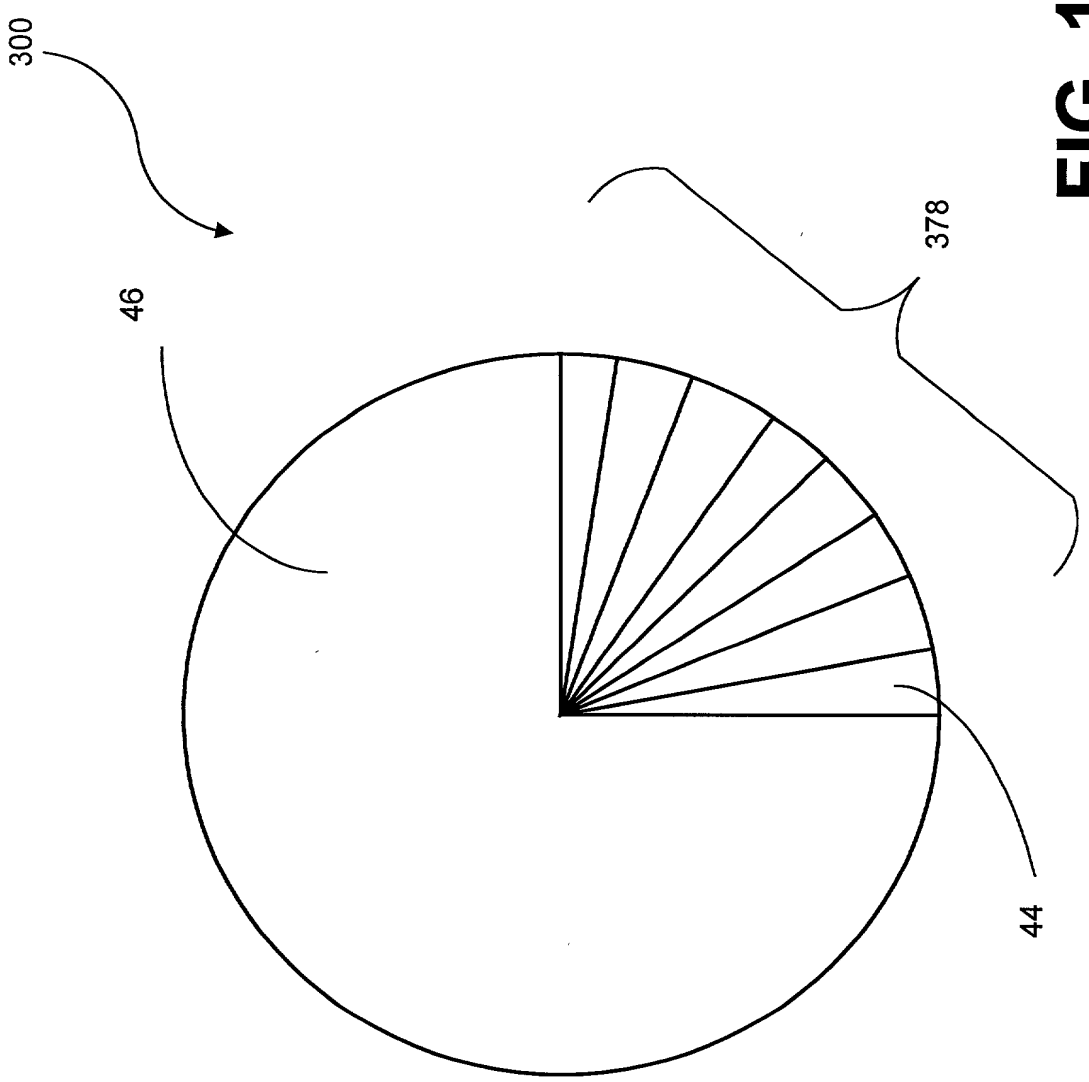

FIG. 11

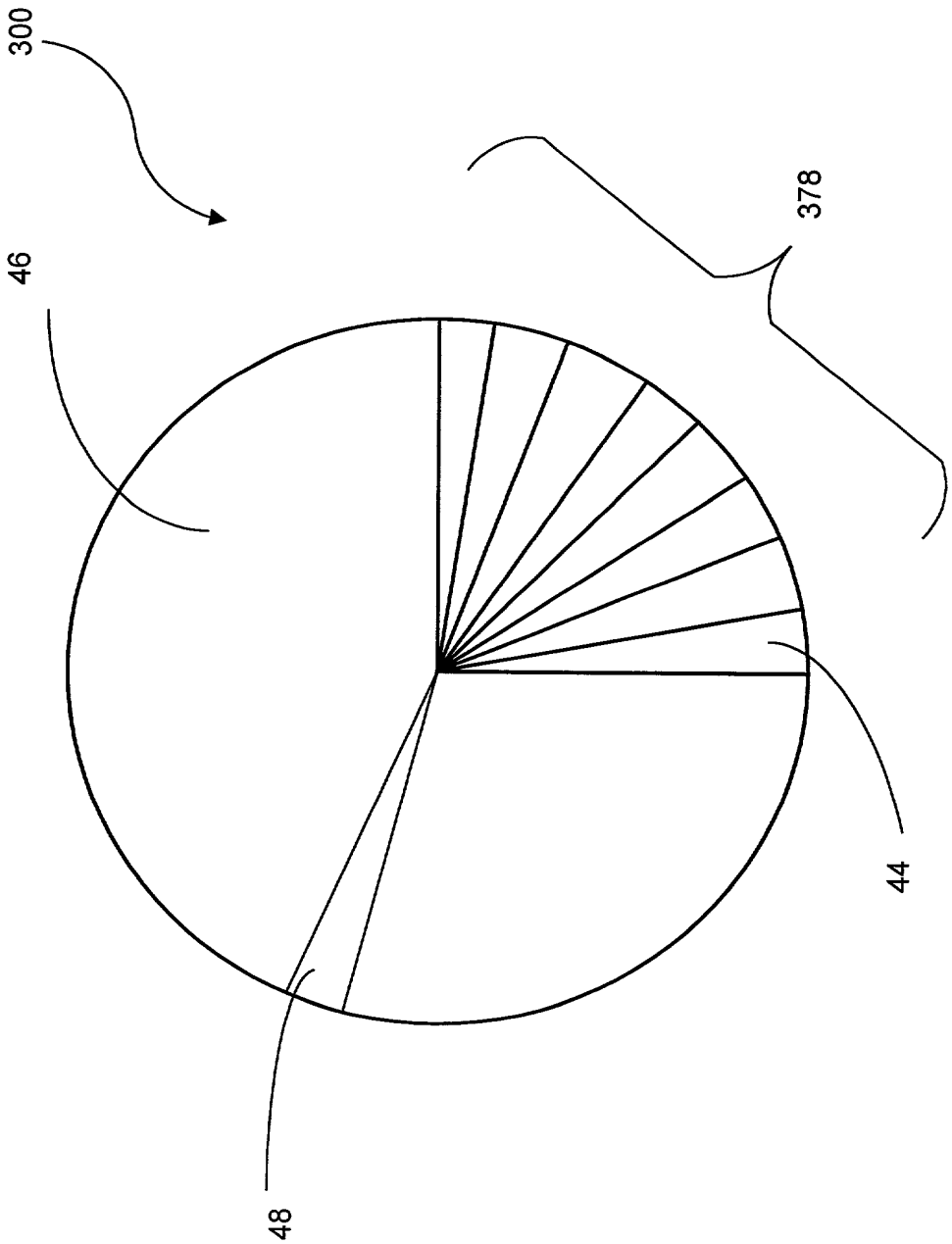

FIG. 12

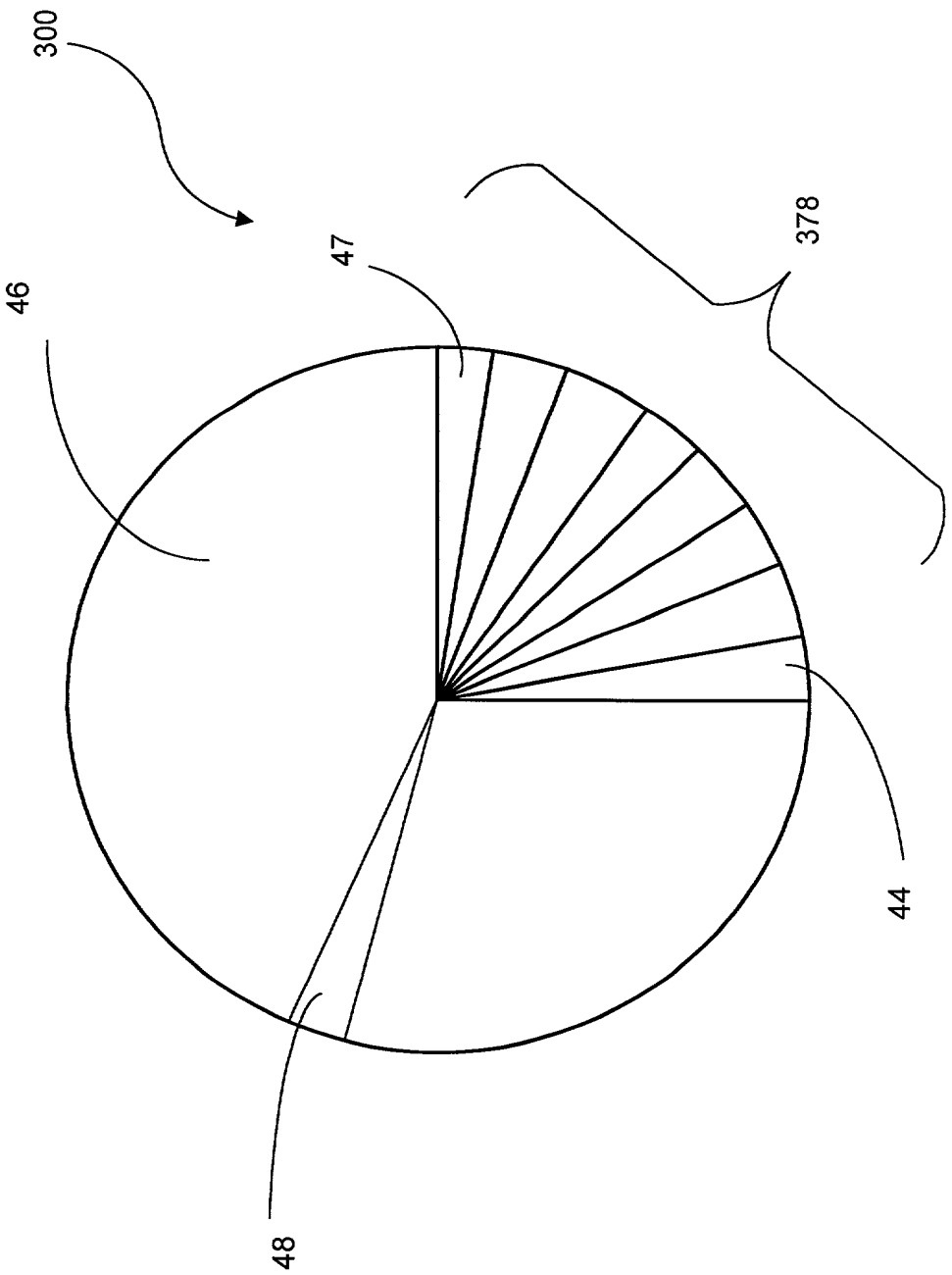

FIG. 13

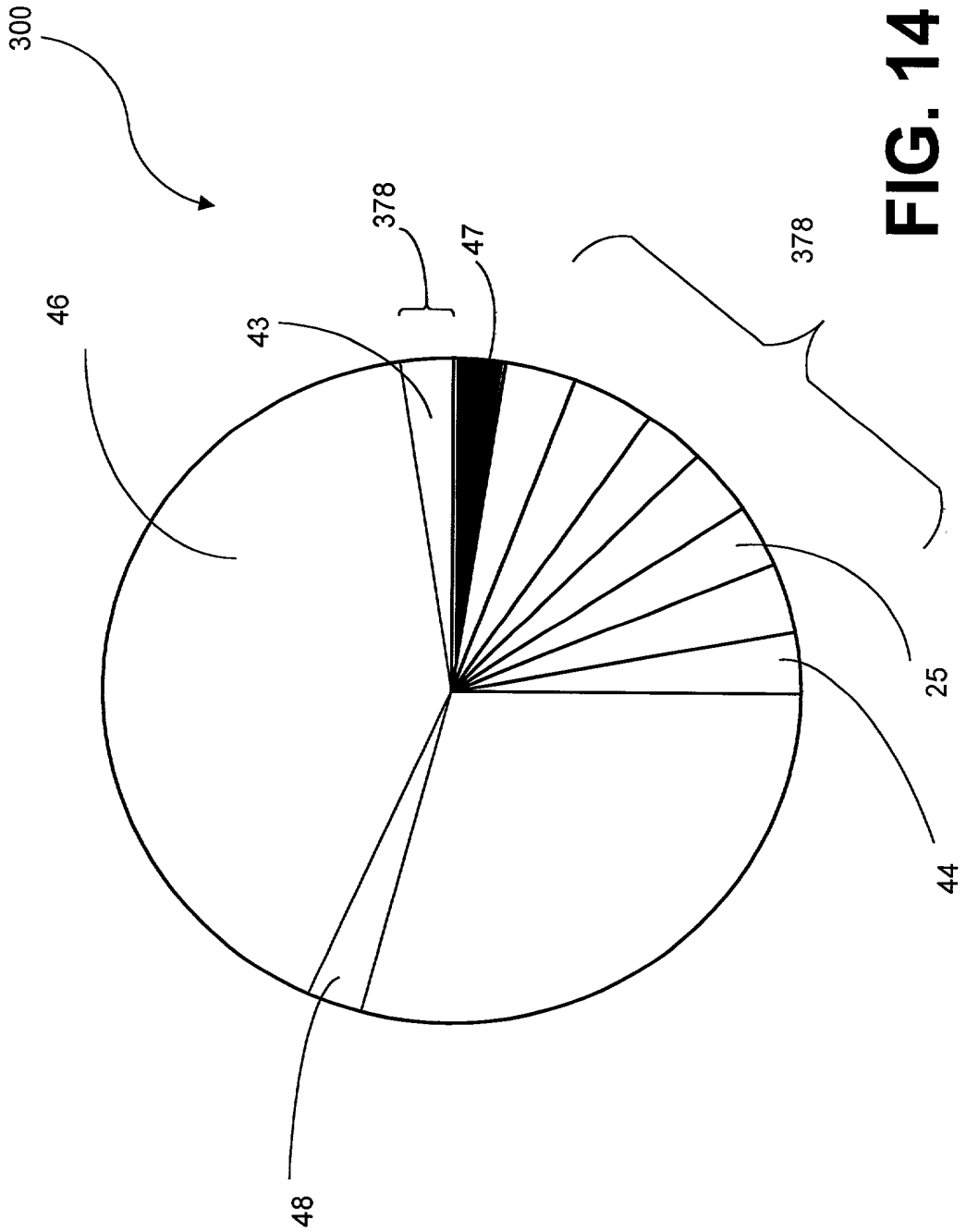

FIG. 14

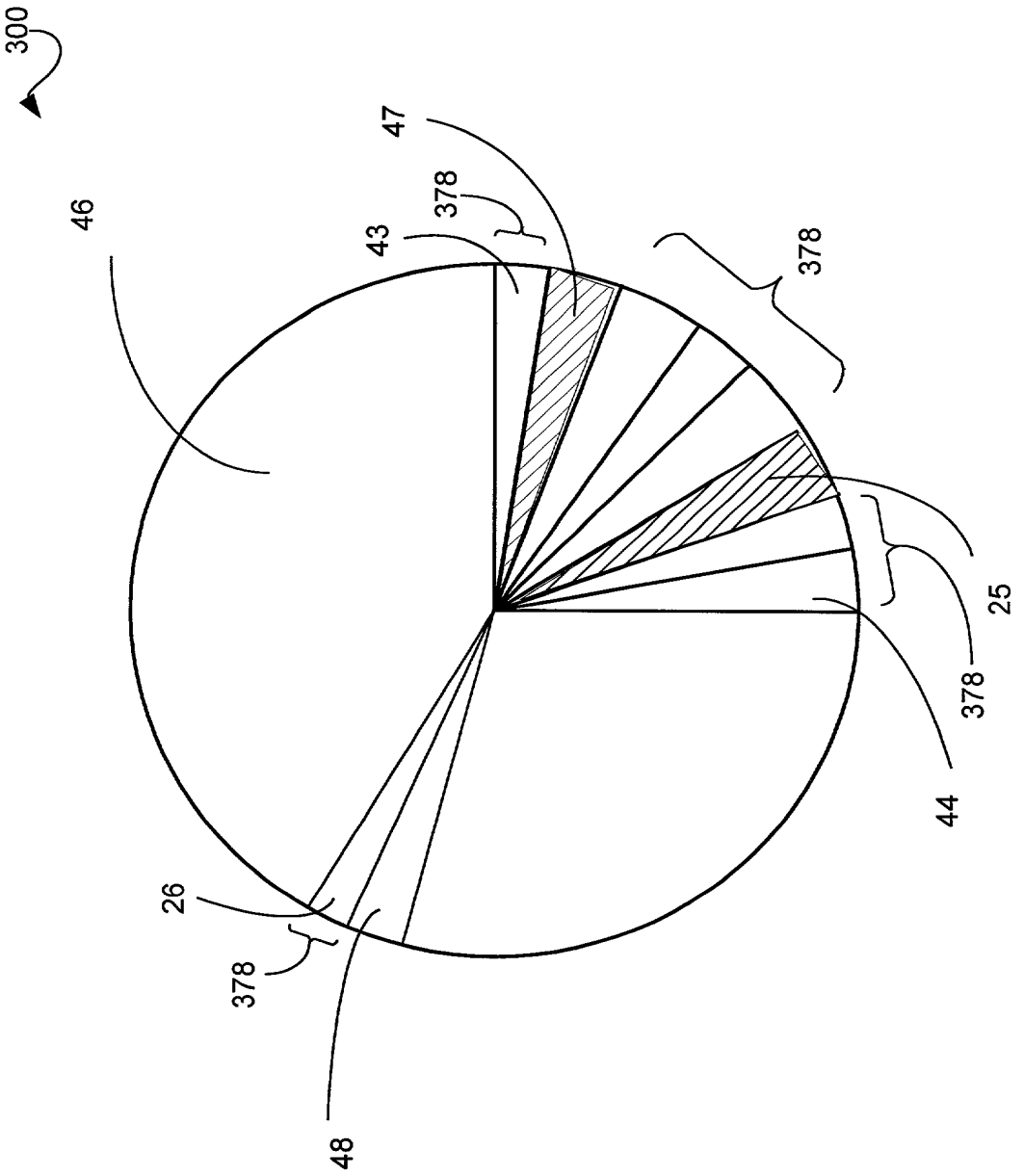

FIG. 15

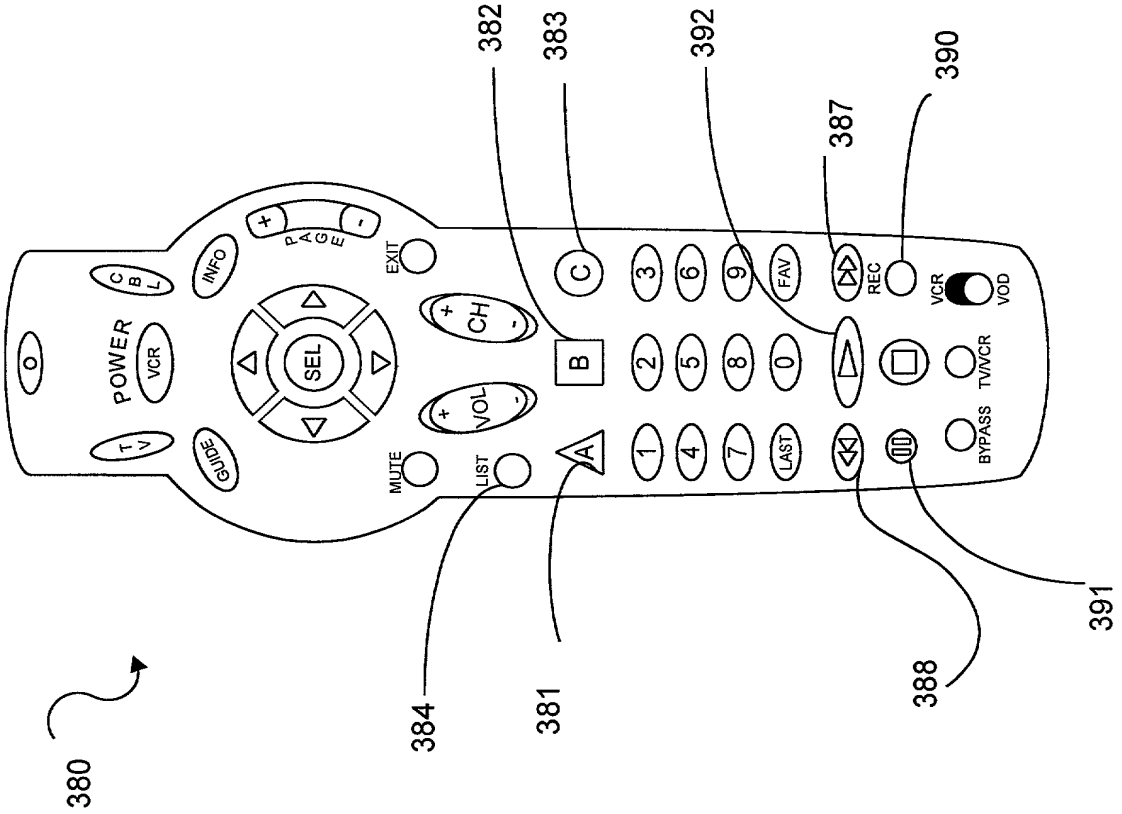
380
382
383
392
390
387
384
381
388
391
POWER
VCR
TV
GUIDE
INFO
SEL
EXIT
PAGE
CH
VOL
MUTE
LIST
FAV
REC
VCR
VOD
TV/VCR
BYPASS
LAST
A
B
C

FIG. 16

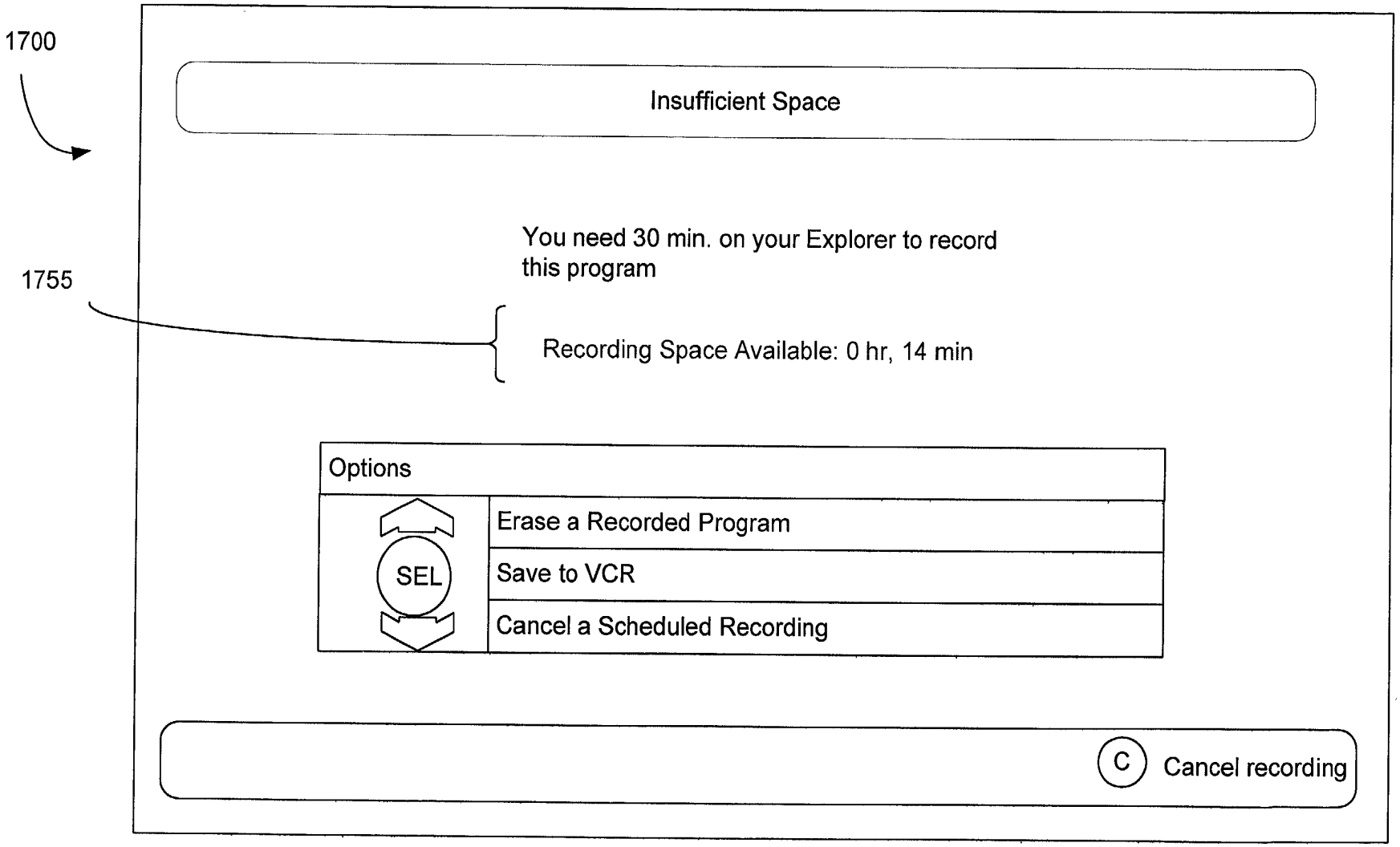
1700
Insufficient Space
You need 30 min. on your Explorer to record this program
1755
Recording Space Available: 0 hr, 14 min
Options
SEL
Erase a Recorded Program
Save to VCR
Cancel a Scheduled Recording
C
Cancel recording

FIG. 17A

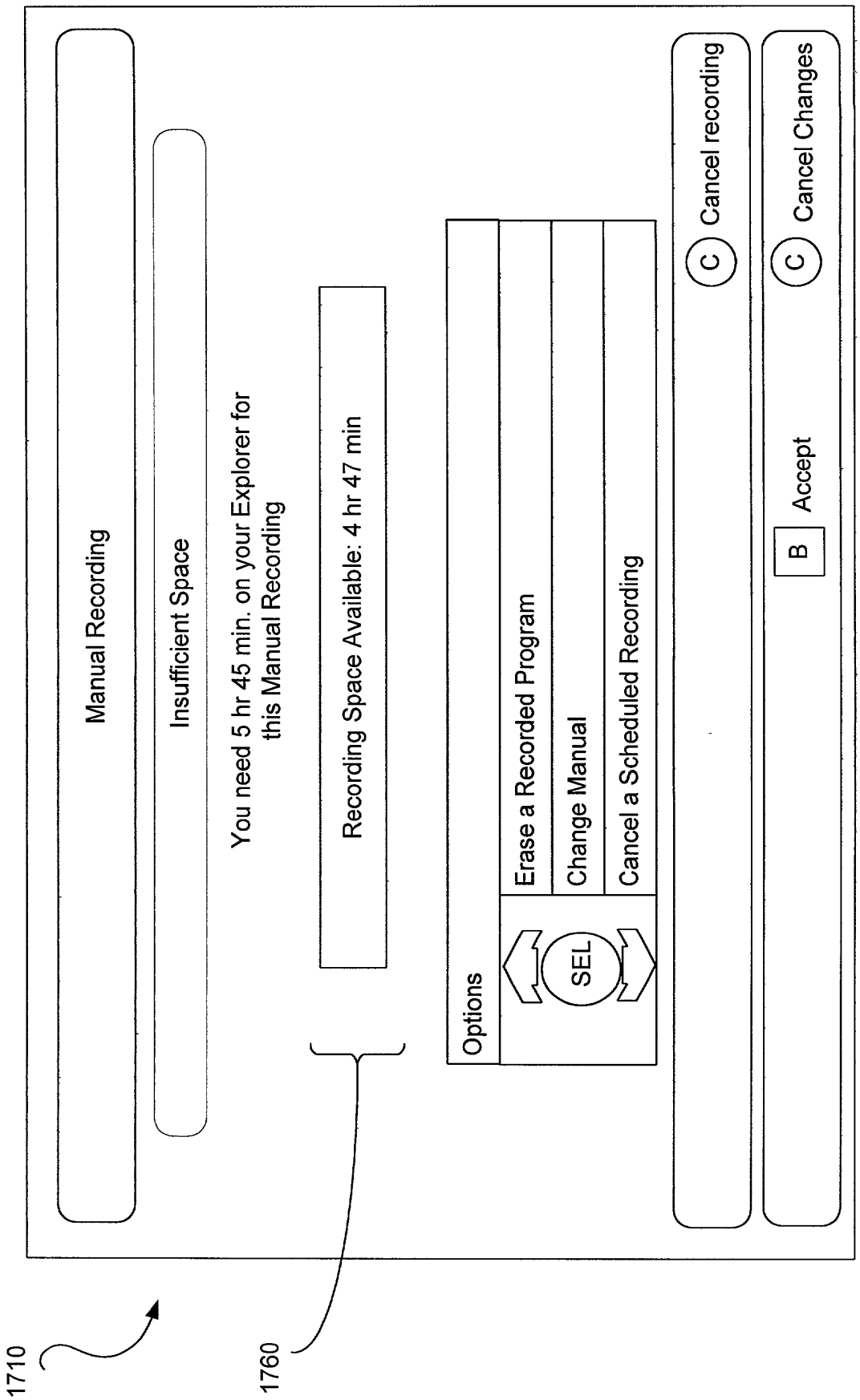
1710
1760
Manual Recording
Insufficient Space
You need 5 hr 45 min. on your Explorer for this Manual Recording
Recording Space Available: 4 hr 47 min
Options
Erase a Recorded Program
Change Manual
Cancel a Scheduled Recording
SEL
C Cancel recording
B Accept
C Cancel Changes

FIG. 17B

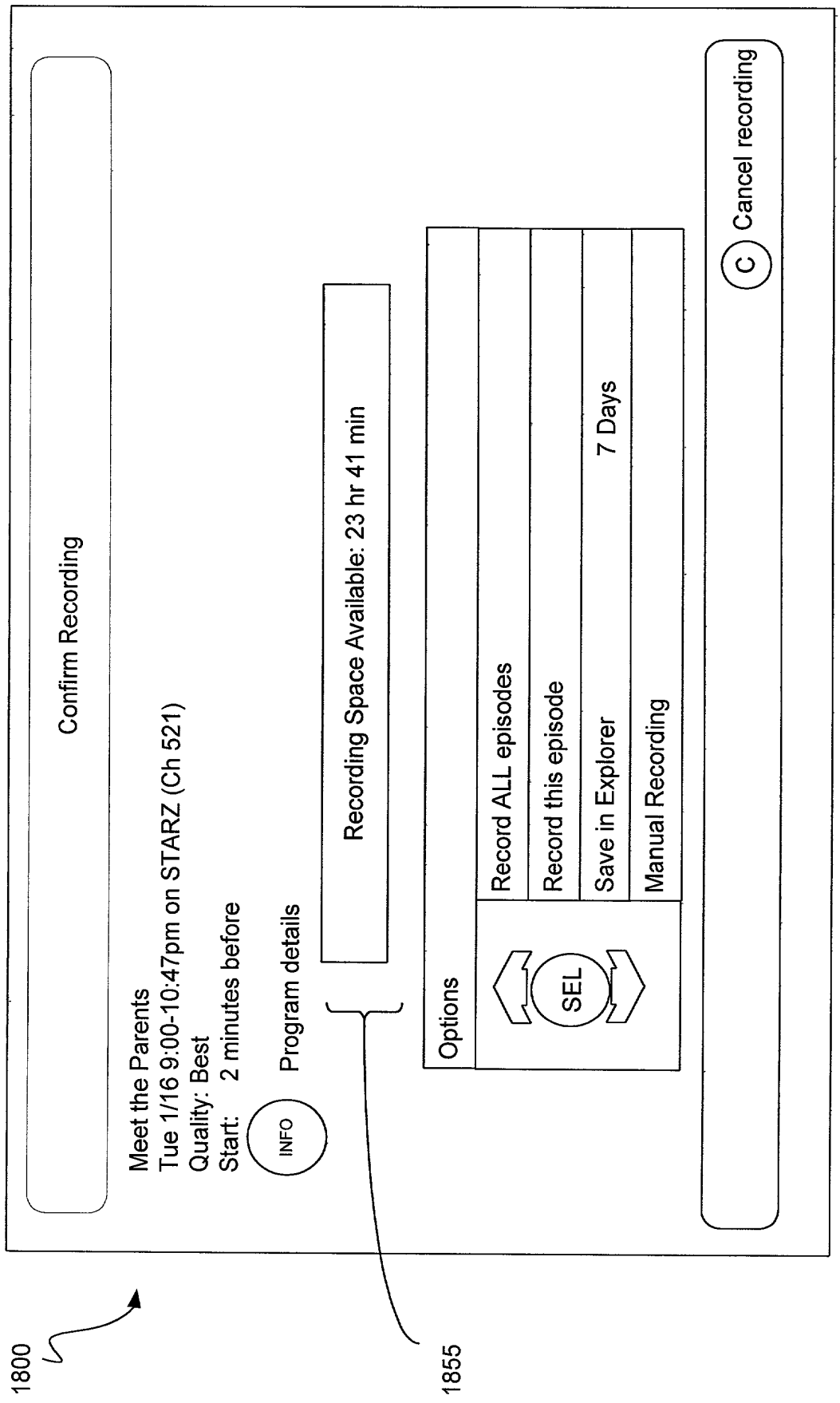
1800
Confirm Recording
Meet the Parents
Tue 1/16 9:00-10:47pm on STARZ (Ch 521)
Quality: Best
Start: 2 minutes before
INFO
Program details
Recording Space Available: 23 hr 41 min
1855
Options
SEL
Record ALL episodes
Record this episode
Save in Explorer
7 Days
Manual Recording
C
Cancel recording

FIG. 18

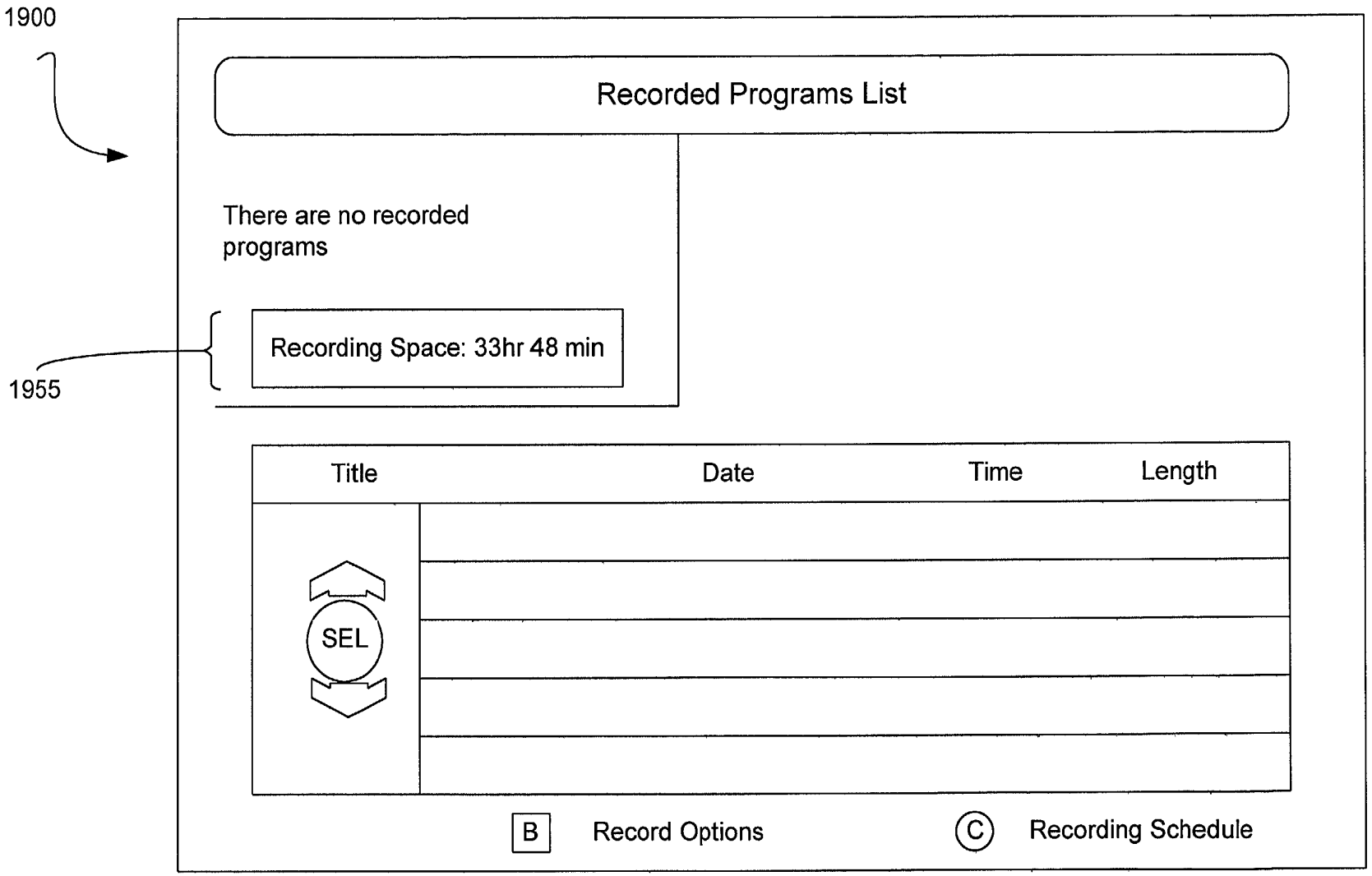
1900
Recorded Programs List
There are no recorded programs
Recording Space: 33hr 48 min
1955
Title
Date
Time
Length
SEL
B
Record Options
C
Recording Schedule

FIG. 19

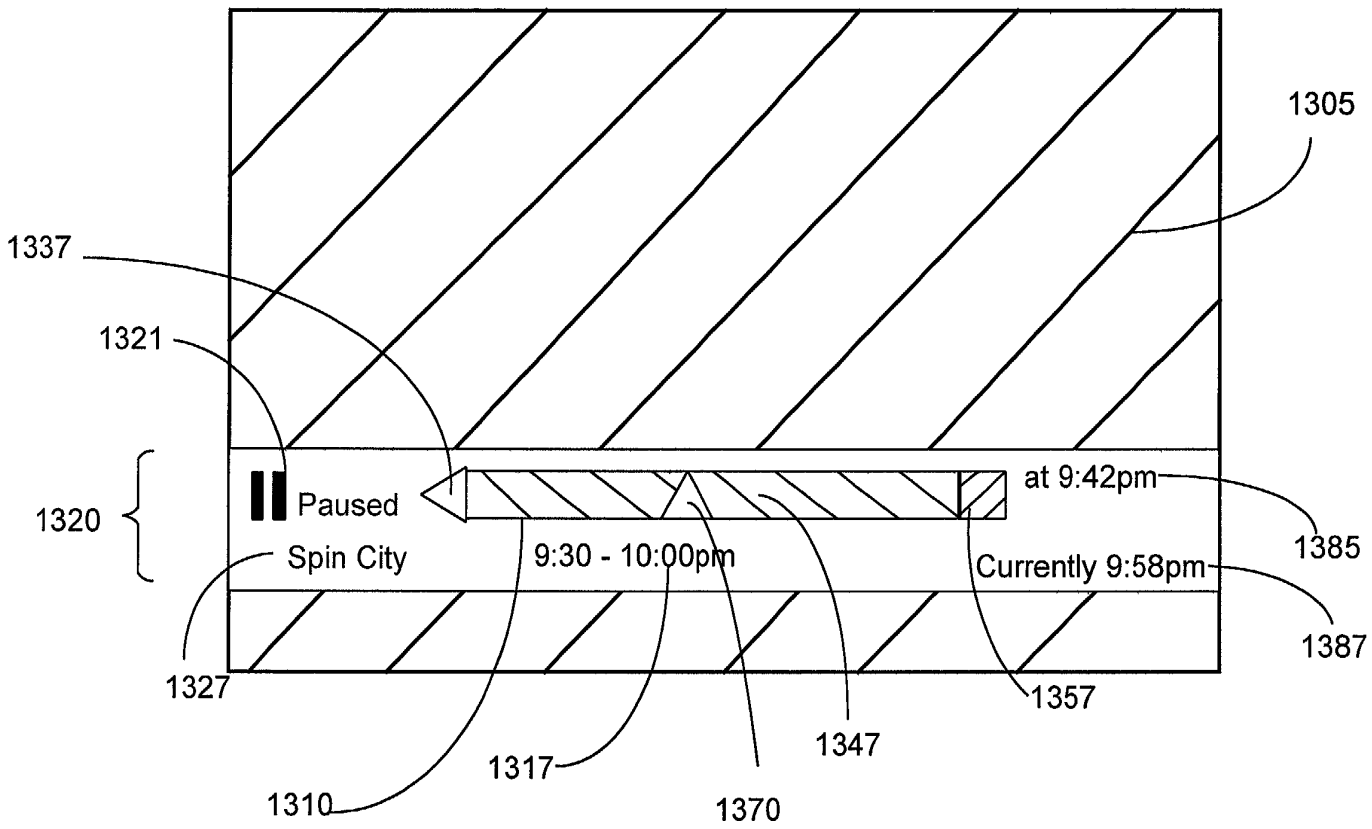
1305
1337
1321
1320
Paused
Spin City
9:30 - 10:00pm
at 9:42pm
1385
Currently 9:58pm
1387
1327
1357
1347
1317
1310
1370

FIG. 20

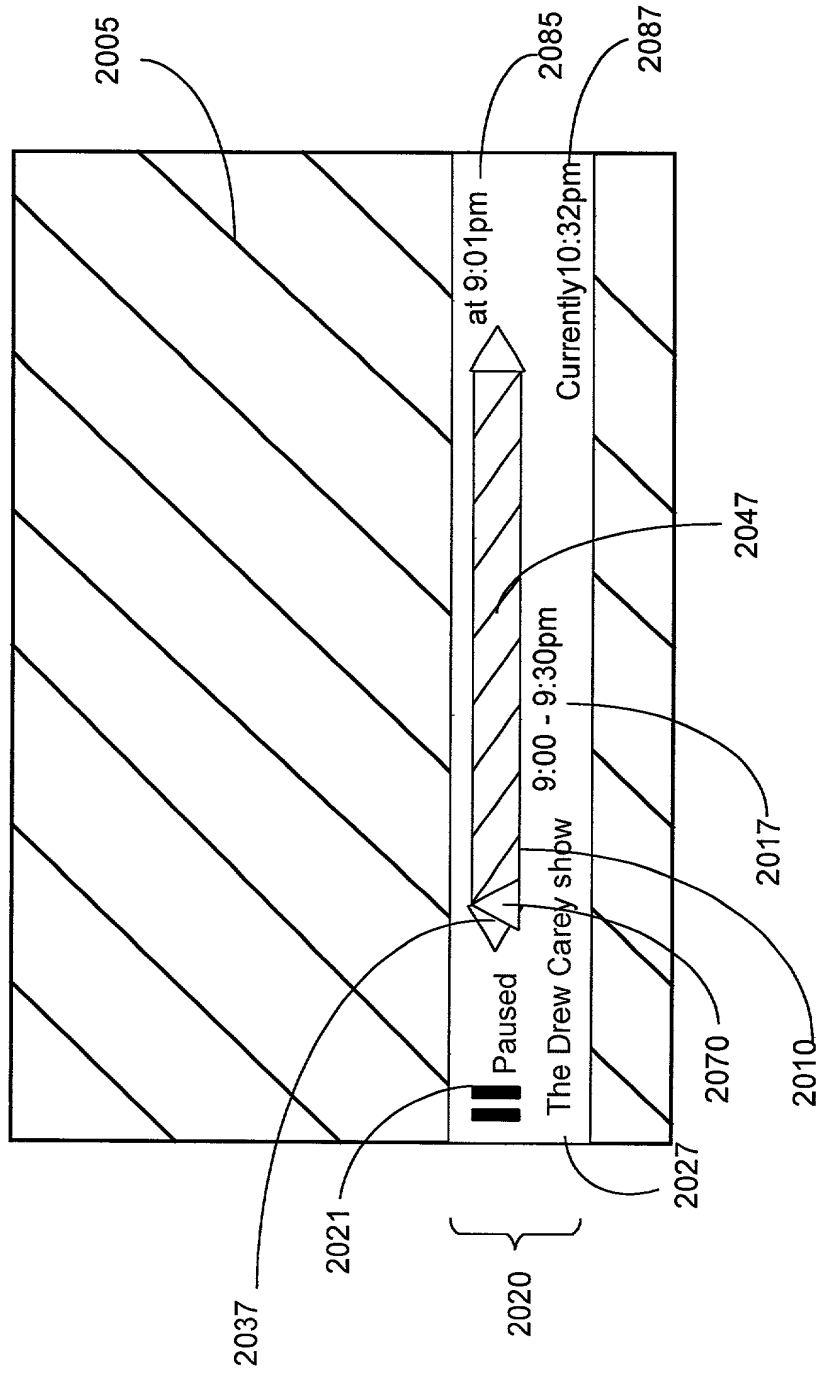
2005
2085
2087
at 9:01pm
Currently10:32pm
2047
9:00 - 9:30pm
2017
The Drew Carey shpw
2070
2010
Paused
2027
2021
2020
2037

FIG. 21

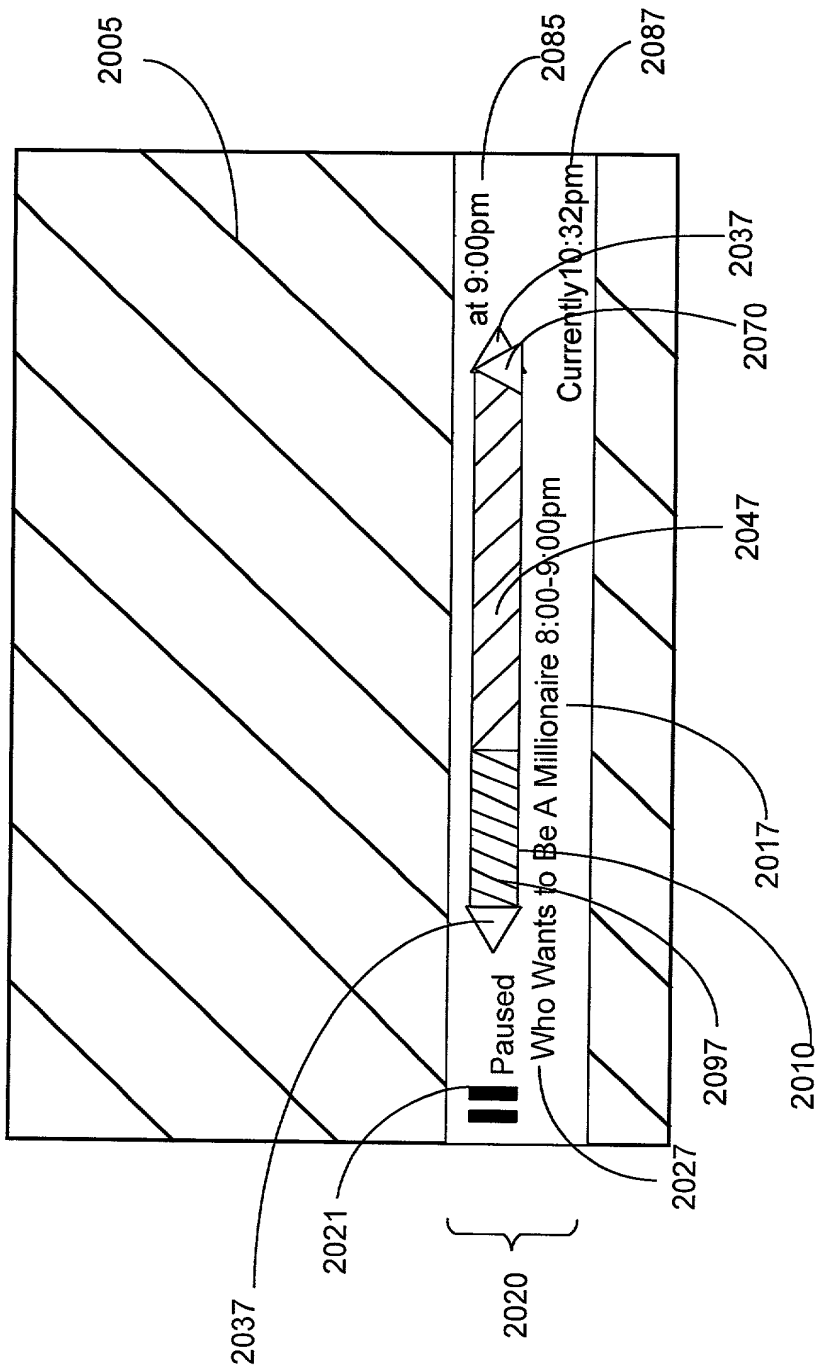
2005
2085
2087
at 9:00pm
Currently 10:32pm
2037
2070
2047
Who Wants to Be A Millionaire 8:00-9:00pm
2017
Paused
2097
2010
2027
2021
2020
2037

FIG. 22